

1 What is claimed is:

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- 3 1. A method for detecting the motion of an element relative to a sensor
4 arrangement, wherein
5 - switching signals (1) are evaluated as a function of a pulse transmitter
6 passing in front of the sensor, and
7 - a switching hysteresis (H) is adapted in the evaluation as a function of the
8 values of the switching signal (1), wherein
9 - when the element moves below a predetermined limiting value (f_{Grenz}), a
10 relatively great switching hysteresis (Hyst0) is set, and when the limiting
11 value (f_{Grenz}) is exceeded, a reduced switching hysteresis (H1) is set.

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- 13 2. The method as recited in Claim 1,
14 wherein

- 15 - the predetermined limiting value is a limiting frequency (f_{Grenz}) for the
16 measured switching signals (1).

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- 18 3. The method as recited in Claim 1 or 2,
19 wherein

- 20 - to detect the motion of a rotatable element, the switching signals (1) of a
21 trigger wheel, as the pulse transmitter, are evaluated.

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- 23 4. The method as recited in one of the preceding claims,
24 wherein

- 25 - a previously measured amplitude of the switching signal (1) is used to
26 determine the relatively great switching hysteresis, as the starting
27 hysteresis (Hyst0).

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- 29 5. The method as recited in one of the Claims 1 through 3,
30 wherein

- 1 - a fixed value is used for the relatively great switching hysteresis, as the
2 starting hysteresis (Hyst0), and/or the reduced switching hysteresis (H1)
3 after the limiting value (f_{Grenz}) is exceeded.
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5 6. A sensor arrangement for performing a method according to one of the
6 preceding claims,
7 wherein

- 8 - the sensor arrangement has contactless sensors with Hall elements or
9 magnetoresistive elements.
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11 7. The sensor arrangement as recited in Claim 6,
12 wherein

- 13 - the sensor arrangement is used as a rotational speed sensor in a motor
14 vehicle.